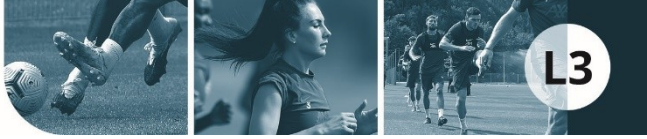
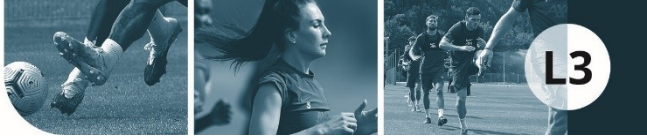


BTEC Assignment Brief

Qualification	Pearson BTEC International Level 3 Qualifications in Sport
Unit number and title	**9: Nutrition for Physical Activity and Exercise**
Learning aims	Learning Aim A: Examine principles of nutrition, digestion and hydration Learning Aim B: Explore energy intake and expenditure in physical activity and exercise
Assignment title	Understand Nutrition
Assessor	
Issue date	
Hand in deadline	

Vocational Scenario or Context	As a trainee personal trainer in a private gym, you have been asked to work with the team to improve the nutritional knowledge and understanding of the clients. The induction offered at the gym is being enhanced with nutritional guidance being offered to each client once they have set their goals and targets for their fitness regime.
Task 1	The team decide to produce a wall display based on current government recommendations for example any relevant government, national and international guidelines to allow all clients to increase their awareness of the expectations. Task: 1. Use research and resources to generate an appropriate wall display which will describe the current nutritional guidelines offered by the government. 2. To enhance the wall display, produce a glossary of terms for the terminology and abbreviations used in nutrition. During the induction period each client will be given a booklet to increase their understanding of nutrition Task: 3. Produce a booklet which states the macro nutrients in a balanced diet, including the function of each and suggested food sources. 4. The clients would benefit from examples of the energy content of each macro nutrient, as well as alcohol to be able to make the link between amounts and the energy requirements of the activity. 5. Extend the booklet to include micro nutrients, including recommended daily intakes and suggested food sources. The information should also include the function of each micro nutrient



6. Fibre is an important part of a balanced diet. Therefore, conclude the booklet by displaying the function and recommended amount of fibre as well as suggested sources.

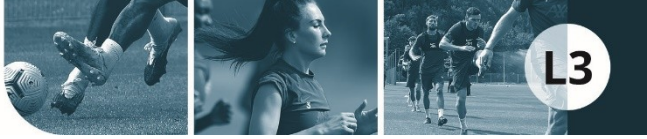
The head personal trainer asks that a podcast is created so that clients can appreciate the importance of maintaining hydration whilst participating in physical activity.

7. Task: produce a podcast which informs that clients on:
    - Signs and symptoms of dehydration
    - Function-maintaining hydration levels
    - Types of fluid
    - Recommended daily intake (RDI)
    - Effects of dehydration (hypernatremia)
    - Effects of hyperhydration (hyponatremia)

8. To enhance the understanding of digestion, produce a poster on the structure and function of the system. Include advice to clients on the relationship between a healthy digestive system and food choices.

During further discussions the team are asked to produce a fact file on 'energy' to share with the clients.

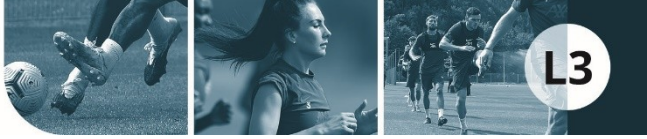
9. The fact file must **include;**
    - Measures and sources
    - Role of carbohydrates, fats and proteins for aerobic and anaerobic metabolism
    - Measuring body composition
    - Calorimetry
    - Storage of energy in the body
    - Energy balance, Physical activity and Basal metabolic rate
    - Factors affecting basal metabolic rate
    - Basic composition of the human body
    - Factors affecting body composition
    - Relationship between body composition and health
    - Types of basic body composition measurement
    - Factors that influence fat loss
    - Definition of the measures of body composition
    - Health implications of variation in body fat distribution patterns



	• Significance of waist to hip ratio • Methods to manage body composition, including metabolism, balance between energy intake and energy expenditure, energy intake
Checklist of evidence required	The case study must include information on the following six topics: • Nutritional principles • Macronutrients • Micronutrients and fibre • Fluid intake • Digestion • Energy • Body composition and weight management

Criteria covered by this task:	
Unit/Criteria reference	To achieve the criteria you must show that you are able to:
A.P1	Describe the sources, functions and daily requirements of macronutrients, micronutrients and fibre from recommended guidelines.
A.P2	Describe hydration and its effects on physical activity and exercise performance.
A.P3	Describe the structure and function of the digestive system in terms of digestion, absorption and excretion.
B.P4	Describe energy intake, expenditure and balance, and the effects on body composition, physical activity and exercise.
A.M1	Explain the relationship between nutrition, hydration and diet, and the impact on physical activity and exercise.
B.M2	Explain energy intake, expenditure and balance in physical activity and exercise.
AB.D1	Analyse nutritional, energy and hydration needs for a selected client.

Sources of information to support you with this Assignment	**Textbooks** Adams, M. et al – BTEC Level 3 National Sport (Performance and Excellence) Student Book (Pearson, 2016) ISBN 9781292134000 Bean, A. The Complete Guide to Sports Nutrition (Complete Guides) Paperback (Bloomsbury Sport; 8th edition 2017) ISBN 101472924207 Bubbs, M. Peak: The New Science of Athletic Performance That Is Revolutionizing Sports (Chelsea Green Publishing Co; 1 edition) ISBN-10: 1603588094 **Websites** Department of Health www.doh.gov.uk Food Standards Agency www.eatwell.gov.uk



	Human Kinetics www.humankinetics.com The World Health Organisation www.who.int
Other assessment materials attached to this Assignment Brief	